

respectfully traversed. Since the provisions of Claim 13 have been incorporated into Claim 1, this rejection is believed to have been obviated. Reconsideration is requested.

Claims 1-13 have been rejected under 35 USC § 103(a) as being unpatentable over Tonkunaga et al. This rejection is respectfully traversed. The Tonkunaga et al. reference relates to a silica dispersion used in ink jet recording materials. There is no disclosure in this reference of the use of fumed alumina. While the Examiner has stated that it would be obvious to one skilled in the art to use fumed alumina "because both alumina and silica are conventional in the art and used as alternatives and because one of ordinary skill in the art would have expected fumed inorganic pigments to have the same or similar properties", no reference was cited to substantiate this allegation.

In fact, the properties of fumed alumina and fumed silica are quite different. For example, the surface charge of fumed alumina is positive. The surface charge of fumed silica is negative. This difference in surface charge requires different melt handling in order to obtain a small particle charge after binder, mordants and cross-linkers are added. See Example 1 of Tonkunaga et al. where a slurry of the cationic polymer and particles had to be treated in a high-pressure homogenizer to prepare a suitable dispersion. In contrast thereto, Element 1 of the Invention on page 9 discloses that merely mixing fumed alumina with binder and cross-linker yields a coating formulation that requires no further treatment. In addition, mordants may also be added without further treatment since the surface charges are compatible.

Another difference between fumed silica and fumed alumina is that their indices of refraction are different resulting in different gloss values being obtained.

Another difference between fumed silica and fumed alumina is that their specific gravities are different. A lower weight % of polymeric binder can be used with fumed alumina as compared to fumed silica, which lower amount enables a lower melt viscosity and better handling to be obtained.

Enclosed herewith is a Declaration under Rule 132 by one of the inventors which compares fumed alumina and fumed silica for dry time and gloss.

It shows that fumed alumina is superior to fumed silica for both of these properties.

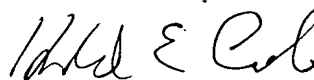
Thus, it is seen that these two materials are not equivalent and applicants have provided examples in the specification and a Declaration using fumed alumina which have many desirable properties in an ink jet element. Reconsideration of this rejection is respectfully requested.

At the interview, the Examiner suggested that the word "about" be deleted in claims 1-3 in order to avoid a rejection under 35 USC 112, which has been done. The missing serial numbers have also been filled in on pages 1, 2 and 6.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "**Version with Markings to Show Changes Made.**"

This application is now considered to be in condition for allowance, which action at an early date is requested.

Respectfully submitted,



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**Version with Markings to Show Changes Made**

Please amend page 1 as follows:

**INK JET RECORDING ELEMENT**

**CROSS REFERENCE TO RELATED APPLICATIONS**

Reference is made to commonly assigned, co-pending U.S. Patent

Applications:

Serial Number [\_\_\_\_\_] 09/770,814 by Bermel et al., [(Docket 81820)] filed [of even date herewith] January 26, 2001 entitled "Ink Jet Recording Element";

Serial Number[\_\_\_\_\_] 09/771,191 by Bermel et al., [(Docket 82109)] filed [of even date herewith] January 26, 2001 entitled "Ink Jet Recording Element";

Serial Number [\_\_\_\_\_] 09/770,429 by Bermel et al., [(Docket 82110)] filed [of even date herewith] entitled "Ink Jet Recording Element";

Serial Number [\_\_\_\_\_] 09/771,189 by Bermel et al., [(Docket 82133)] filed [of even date herewith] January 26, 2001 entitled "Ink Jet Printing Method";

Serial Number [\_\_\_\_\_] 09/770,433 by Bermel et al., [(Docket 82134)] filed [of even date herewith] January 26, 2001 entitled "Ink Jet Printing Method";

Serial Number [\_\_\_\_\_] 09/770,807 by Bermel et al., [(Docket 82138)] filed [of even date herewith] January 26, 2001 entitled "Ink Jet Printing Method";

Serial Number [\_\_\_\_\_] 09/770,728 by Bermel et al., [(Docket 82139)] filed [of even date herewith] January 26, 2001 entitled "Ink Jet Printing Method";

Serial Number [\_\_\_\_\_] 09/770,128 by Lawrence et al., [(Docket 81815)] filed [of even date herewith] January 26, 2001 entitled "Ink Jet Printing Method";

Serial Number [\_\_\_\_\_] 09/770,127 by Lawrence et al., [(Docket 81817)] filed [of even date herewith] January 26, 2001 entitled "Ink Jet Printing Method";

Serial Number [\_\_\_\_\_] 09/770,781 by Lawrence et al., [(Docket 81818)] filed [of even date herewith] January 26, 2001 entitled "Ink Jet Printing Method";

Serial Number [\_\_\_\_\_] 09/771,251 by Lawrence et al., [(Docket 81821)] filed [of even date herewith] January 26, 2001 entitled "Ink Jet Printing Method";

Serial Number [\_\_\_\_\_] 09/770,122 by Lawrence et al., [(Docket 81893)] filed [of even date herewith] January 26, 2001 entitled "Ink Jet Printing Method";

Serial Number [ ] 09/772,097 by Lawrence et al., [(Docket 81894)]  
filed [of even date herewith] January 26, 2001 entitled "Ink Jet Printing Method";  
and

Please amend the first paragraph of page 2 as follows:

Serial Number [ ] 09/770,431 by Lawrence et al., [(Docket 81983)]  
filed [of even date herewith] January 26, 2001 entitled "Ink Jet Printing Method".

Please amend the first paragraph of page 6 as follows:

They can be linear, branched, hyper-branched, grafted, random, blocked, or can have other polymer microstructures well known to those in the art. They also can be partially crosslinked. Examples of core/shell particles useful in the invention are disclosed and claimed in U.S. Patent Application Serial No. [ ] 09/772,097 of Lawrence et al., Ink Jet Printing Method, filed [of even date herewith] January 26, 2001, [Docket 81894HEC], the disclosure of which is hereby incorporated by reference. Examples of water dispersible particles useful in the invention are disclosed and claimed in U.S. Patent Application Serial No. [ ] 09/770,128 of Lawrence et al., Ink Jet Printing Method, filed [of even date herewith] January 26, 2001, [Docket 81815HEC]; and U.S. Patent Application Serial No. [ ] 09/770,127 of Lawrence et al., Ink Jet Printing Method, filed [of even date herewith] January 26, 2001, [Docket 81817HEC], the disclosures of which are hereby incorporated by reference.

### **In the Claims**

Please rewrite Claims 1-3 as follows:

1(amended). An ink jet recording element comprising a support having thereon a porous image-receiving layer comprising particles of fumed alumina, a poly(vinyl alcohol) binder and a crosslinking agent, said particles having a primary particle size of from about 7 to about 40 nm in diameter which may be aggregated up to about 300 nm, and said crosslinking agent being present in an amount of at least[about] 20 weight % of said poly(vinyl alcohol) binder.

2(amended). The recording element of Claim 1 wherein said crosslinking agent is present in an amount of at least [about] 40 weight % of said poly(vinyl alcohol) binder.

3(amended). The recording element of Claim 1 wherein said crosslinking agent is present in an amount of at least [about] 50 weight % of said poly(vinyl alcohol) binder.

Please cancel claims 9-13.